What Is Claimed Is:

1. A numerical control device for controlling a machine having an axis of linear motion and at least one axis of rotation on a tool head or a table, said numerical control device comprising:

means for obtaining a machine position to which the machine should actually move so that the relation between a workpiece and a tool that is found when there is no mechanical error is maintained on the basis of a reference position at which there is no mechanical error in the axis of rotation and an amount of misalignment of the actual axis of rotation from the reference position, and/or on the basis of a reference position at which there is no mechanical error in the turning center of the spindle and an amount of misalignment of the actual turning center of the spindle from the reference position of the turning center of the spindle; and

drive control means for driving the axis of rotation and the axis of linear motion to the machine position obtained by said machine position obtaining means.

2. The numerical control device according to claim 1, wherein said tool head of the machine rotates about at least one axis.

3. The numerical control device according to claim 1, wherein said table of the machine rotates about at least one axis.

4. The numerical control device according to claim 1, wherein said machine has the tool head and the table which rotate.

5. The numerical control device according to any of claims 1 to 4, wherein said amount of misalignment is set by a parameter in the numerical control device.

6. The numerical control device according to any of claims 1 to 4, wherein the amount of misalignment is delivered to the numerical control device by a signal from the

machine to the numerical control device.

7. The numerical control device according to any of claims 1 to 4, wherein the amount of misalignment is delivered to the numerical control device by a signal from external equipment to the numerical control device.

8. A numerical control method that uses a numerical control device for a machine having an axis of linear motion and a least one axis of rotation on a tool head or a table, said method comprising the steps of:

obtaining a machine position to which the machine should actually move so that the relation between a workpiece and a tool that is found when there is no mechanical error is maintained on the basis of a reference position at which there is no mechanical error in the axis of rotation and an amount of misalignment of the actual axis of rotation from the reference position, and/or on the basis of a reference position at which there is no mechanical error in the turning center of the spindle and an amount of misalignment of the actual turning center of the spindle from the reference position of the turning center of the spindle; and

moving the axis of linear motion and the axis of rotation to the machine position thus obtained.

9. The numerical control method according to claim 8, wherein the tool head of the machine rotates about at least one axis, and said method further comprising the steps of:

correcting the tool length vector on the basis of a reference position at which there is no mechanical error in the axis of rotation and an amount of misalignment of the actual axis of rotation from the reference position, and/or a reference position at which there is no mechanical error in the turning center of the spindle, an amount of misalignment of the actual turning center of the spindle from the reference position of the turning center of the spindle, and instruction for

the axis of rotation, and

adding the instruction position vector to the corrected tool length vector and obtaining the machine position.

10. The numerical control method according to claim 8, wherein the table of the machine rotates about at least one axis, said method further comprising the steps of:

adding an offset of the origin of a table coordinate system to an instruction position in an table coordinate system and thereby obtaining an instruction position in the machine coordinate system; and

correcting misalignment of the instruction position in the machine coordinate system on the basis of a reference position at which there is no mechanical error in the axis of rotation, an amount of misalignment of the actual axis of rotation from the reference position, and the instruction position for the axis of rotation, obtaining a position where the axis of rotation has rotated to the rotation position according to the instruction, and adding a tool length vector to the position to obtain the machine position.

11. The numerical control method according to claim 8, wherein said machine has the tool head and table which rotate, said method comprising the steps of:

adding an offset of the origin of a table coordinate system to a position instruction in the table coordinate system and thereby obtaining an instruction position in a machine coordinate system;

obtaining an instruction position for which the misalignment has been corrected on the basis of an amount of misalignment of the actual axis of rotation provided to the table from a reference position at which there is no mechanical error in the axis of rotation and an instruction position for the axis of rotation;

obtaining an attitude of the tool for which misalignment has been corrected on the basis of an amount of misalignment of the actual axis of rotation provided to the tool head from a reference position at which there is no mechanical error in an axis of rotation and the instruction position of the axis of rotation, in addition to a tool length vector; and

obtaining a machine position from the instruction position for which the misalignment has been corrected and the attitude of the tool for which the misalignment has been corrected.

12. The numerical control method according to any of claims 8 to 11, wherein the amount of misalignment is delivered to the numerical control device by means of a parameter setting in the numerical control device, a signal from the machine, or a signal from external equipment.